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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WONG, EDNA	
ART UNIT	**PAPER NUMBER**
1795	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,924	PARAMONOV ET AL.	
	Examiner	Art Unit	
	Edna Wong	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *September 21, 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Specification

The disclosure is objected to because of the following informalities:

page 6, line 5, it is unclear what is meant by the words "by the use the composition".

Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claims **1, 3 and 8** are objected to because of the following informalities:

Claim 1

line 8, the word -- a -- should be inserted after the word "having".

Claim 3

line 2, the word "claims" should be amended to the word -- claim --.

Claim 8

line 2, the word -- a -- should be inserted after the word "of" (second occurrence).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

I. Claims **1-9** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1

line 3, the phrase "(in a form of tin sulfamate)" is indefinite. The ***parentheses*** should be deleted.

lines 8-9, the words "number of ethylene oxide links-to-number to propylene links" are indefinite. The ***quotations*** should be deleted.

Claim 3

line 2, it appears that "a tinning composition" is the same as the composition recited in claim 1, line 1. However, it is unclear if it is.

Claim 4

line 2, it appears that the "strip" is the same as the steel strip recited in claim 3, line 1. However, it is unclear if it is. If it is, then it is suggested that the words "strip conveying speed" be amended to the words -- the steel strip conveying at a speed --.

II. Claims **3-9** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the method steps for electrotinning.

Claim 3

lines 1-2, recite a "Method for electrotinning a surface in the form of a steel strip or plate" in the preamble.

The body of the claim does not claim such a method because the only method step recited in claim 3 is *using a tinning composition according to claim 1 or 2.*

The "using" step is not necessarily a method for electrotinning because a preamble is not necessarily accorded any patentable weight where it merely recites ***the purpose of a process*** or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. *In re Hirao* 535 F. 2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie* 187 F 2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

One having ordinary skill in the art would have been able to use the composition on electrotinning the surface of a multilayer ceramic capacitor.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Product

I. Claim **9** is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **RU 2,103,418** ('418).

RU '418 teaches an electrotinned strip or plate with a tin coating weight (= electrolytic tinning of a steel strip) [abstract].

The strip or plate of RU '418 differs from the instant invention because RU '418 does not disclose the following:

a. Wherein electrotinning is according to the method of claim 3, as recited in claim 9.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because the invention defined in a product by process claim is a product, not a process. *In re Bridgeford* 679, 149 USPQ 55 (CCPA 1966). It is the patentability of the product claimed and NOT of the recited process steps which must be established. *In re Brown 459* F. 2d 531, 173 USPQ 685 (CCPA 1972); *In*

re Wertheim 541 F. 2d 257, 191 USPQ 90 (CCPA 1976).

When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicants to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown* 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman* 489 F. 2d 742, 180 USPQ 685 (CCPA 1972) and MPEP § 2113.

b. Wherein the tin coating weight is 3.65 g/m^2, as recited in claim 9.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because RU '418 discloses a similar electrotinning method as presently claimed. Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 195).

c. Wherein the strip or plate having a relative porosity of about 0.06%, as recited in claim 9.

RU '418 teaches a steel strip (abstract). The steel strip inherently has a relative porosity.

The invention as a whole would have been obvious to one having ordinary skill in

the art at the time the invention was made because the steel strip disclosed by RU '418 reads on the steel strip as presently claimed, and thus, steel and all of its properties are inseparable.

II. Claim **9** is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Yoshihara et al.** (US Patent No. 3,997,301).

Yoshihara teaches an electrotinned strip or plate (= a tin-electroplated cold rolled low carbon steel sheet) with a tin coating weight of 3.65 g/m^2 (= 1 to 15 g/m^2 of tin) [col. 2, lines 28-30].

The strip or plate of Yoshihara differs from the instant invention because Yoshihara does not disclose the following:

a. Wherein electrotinning is according to the method of claim 3, as recited in claim 9.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because the invention defined in a product by process claim is a product, not a process. *In re Bridgeford* 679, 149 USPQ 55 (CCPA 1966). It is the patentability of the product claimed and NOT of the recited process steps which must be established. *In re Brown 459* F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Wertheim* 541 F. 2d 257, 191 USPQ 90 (CCPA 1976).

When the prior art discloses a product which reasonably appears to be either

identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicants to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown* 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman* 489 F. 2d 742, 180 USPQ 685 (CCPA 1972) and MPEP § 2113.

b. Wherein the strip or plate having a relative porosity of about 0.06%, as recited in claim 9.

Yoshihara teaches a steel strip (= a cold rolled low carbon steel sheet) [col. 2, lines 28-30]. The steel strip inherently has a relative porosity.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because the steel strip disclosed by Yoshihara reads on the steel strip as presently claimed, and thus, steel and all of its properties are inseparable.

III. Claim **9** is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Ichiba et al.** (US Patent No. 5,871,631).

Ichiba teaches an electrotinned strip or plate (= a tin-electroplated cold rolled steel sheet) with a tin coating weight of 3.65 g/m^2 (= 0.5 to 11.2 g/m^2 of tin) [col. 8, lines 20-33].

The strip or plate of Ichiba differs from the instant invention because Ichiba does not disclose the following:

a. Wherein electrotinning is according to the method of claim 3, as recited in claim 9.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because the invention defined in a product by process claim is a product, not a process. *In re Bridgeford* 679, 149 USPQ 55 (CCPA 1966). It is the patentability of the product claimed and NOT of the recited process steps which must be established. *In re Brown 459* F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Wertheim* 541 F. 2d 257, 191 USPQ 90 (CCPA 1976).

When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicants to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown* 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman* 489 F. 2d 742, 180 USPQ 685 (CCPA 1972) and MPEP § 2113.

b. Wherein the strip or plate having a relative porosity of about 0.06%, as recited in claim 9.

Ichiba teaches a steel strip (= a cold rolled low carbon steel sheet) [col. 2, lines 28-30]. The steel strip inherently has a relative porosity.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because the steel strip disclosed by Ichiba reads on the steel strip as presently claimed, and thus, steel and all of its properties are inseparable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Composition

Claims **1 and 2** are rejected under 35 U.S.C. 103(a) as being unpatentable over **RU 2,103,418** ('418) in combination with **Brown et al.** (US Patent No. 6,322,686 B1) and **Kalinin** ("Improvement of Lubricity of Water-Containing Fluid Based on Proxamine 385", *Ivanovo Chemical Technology Institute. Translated from Khimiya Teknologiya Topliv I Masel*, No. 11, pp. 27-28, November, 1986, pp. 598-600).

RU '418 teaches a composition to be used in a process for electroplating surfaces with tin (= electrolytic tinning), said composition comprising the following components:

(a) 20-37 g/l of tin (= tin in the form of bivalent ions);

(b) 40-100 g/l of sulfamic acid, free (= ***100***-140 g/l);

(c) 0-15 g/l sulfates, in a form of SO_n^{2-} (= 0 g/l);

(d) 1-6 g/l of a nitrogen-bearing block copolymer of propylene oxide and ethylene oxide (= 0.5-2.5 g/l) [abstract],

wherein said copolymer has a molecular weight (= *inherent* in Proxamine-385).

The composition of RU '418 differs from the instant invention because RU '418 does not disclose the following:

a. 50-90 g/l of tin (in a form of tin sulfamate), as recited in claim 1.

Like RU '418, Brown teaches electrolyte compositions for depositing tin (col. 1, lines 4-7). Brown teaches that when the compositions are used in *a low speed plating process*, the amount of tin present in the electrolyte composition is typically in the range of *5 to 40 g/L*. When the compositions are used in *a high speed plating process*, the amount of tin present in the electrolyte composition is typically in the range of *20 to 100 g/L*. When the compositions are used in *high tin plating of steel*, the amount of tin is typically in the range of *5 to 50 g/L* (col. 3, lines 33-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the concentration of tin described by RU '418 with 50-90 g/l of tin because 50 g/L is a conventional amount of tin used in the high tin plating of steel as taught by Brown (col. 3, lines 33-49).

Furthermore, the concentration of tin is a result-effective variable and one skilled in the art has the skill to calculate the concentration of tin that would have determined

the success of the desired reaction to occur, e.g., for a low speed plating process, for a high speed plating process and for the high tin plating of steel (MPEP § 2141.03 and § 2144.05(II)(B)).

b. Wherein said copolymer has a molecular weight of 3950 to ***6450***, as recited in claim 1.

- Kalinin teaches that Proxamine 385 has molecular weight of ***7600*** (page 598, second paragraph).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the molecular weight of the copolymer described by RU '418 with wherein said copolymer has a molecular weight of 3950 to 6450 because the molecular weight of the copolymer appears to be a mere optimization which solves no stated problems and produces no unexpected results, unless proven otherwise.

Furthermore, a molecular weight difference of ***1150*** appears to solve no stated problems and produces no unexpected results, unless proven otherwise.

c. Wherein a number of ethylene oxide links-to-number of propylene oxide links ratio of 1.4-1.2:1.0 at ***initial buildup*** of required number of links from propylene oxide followed by ***oxyethylation***, as recited in claim 1.

The invention as a whole would have been obvious to one having ordinary skill in

the art at the time the invention was made because the initial buildup and oxyethylation are method limitations and does not compositionally distinguish the composition from the prior art

d. Wherein the composition has a pH of 0.6 to 1.1, as recited in claim 2.

RU '418 teaches an acid containing composition (abstract). The composition inherently has a pH.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because RU '418 discloses a composition in a similar manner as instantly claimed. Thus, one having ordinary skill in the art would have expected that the composition would have had a pH of 0.6 to 1.1, unless proven otherwise.

Method

Claims **3-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **RU 2,103,418** ('418) in combination with **Brown et al.** (US Patent No. 6,322,686 B1) and **Kalinin** ("Improvement of Lubricity of Water-Containing Fluid Based on Proxamine 385", *Ivanovo Chemical Technology Institute. Translated from Khimiya Teknologiya Topliv I Masel*, No. 11, pp. 27-28, November, 1986, pp. 598-600) as applied to claims 1 and 2 above, and further in view of **Ichiba et al.** (US Patent No. 5,871,631).

RU '418, Brown and Ichiba are as applied above and incorporated herein.

RU '418 teaches a method for electrotinning a surface in form of a steel strip or plate (= electrolytic tinning of a steel strip) [abstract] wherein a tinning composition according to claim 1 or 2 is used.

The method of RU '418 differs from the instant invention because RU '418 does not disclose the following:

a. Wherein the method is performed in continuous electrotinning lines with strip conveying speed of 2 to 11 m/s, as recited in claim 4.

b. Wherein the method is performed at temperatures of 20 to 70°C, as recited in claim 5.

c. Wherein the method is performed at current densities of 5 to 70 A/dm^2, as recited in claim 6.

d. Wherein the strip or plate is subjected to a pre-treatment of degreasing and pickling, as recited in claim 7.

e. Wherein the strip or plated is subjected to a post-treatment of reflowing, passivation and oiling of tin coating, as recited in claim 8.

Like '418, Ichiba teaches the electrotinning of a steel sheet.

Ichiba teaches a method for electrotinning a surface in form of a steel strip or plate (= a cold-rolled steel sheet),

wherein the method is performed in continuous electrotinning lines with strip conveying speed of 2 to 11 m/s (= 2 m/sec);

wherein the method is performed at temperatures of 20 to 70°C (= 45°C);

wherein the method is performed at current densities of 5 to 70 A/dm^2 (= 30 to 200 A/dm^2);

wherein the strip or plate is subjected to a pre-treatment of degreasing and pickling (= electrolytic alkali degreasing and electrolytic pickling) [col. 8, lines 20-33]; and

wherein the strip or plated is subjected to a post-treatment of reflowing, passivation and oiling of tin coating (= reflow) [col. 8, lines 34-45].

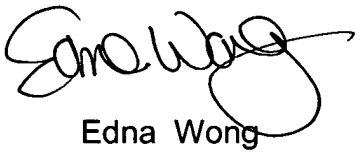
It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by RU '418 with (a) to (e) above because these would have been conditions of an electro-tinplating line of a steel sheet for can-production as taught by Ichiba (col. 8, lines 20-45).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Edna Wong
Primary Examiner
Art Unit 1795

EW
December 6, 2007